

In response to the Office Action dated July 16, 2002, please amend the subject application as follows:

Please amend claims 1, 2, 4, 7, 8, 10 and 13 - 18 as follows:

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1. (Twice Amended) A voice coding method based on analysis-by-synthesis vector quantization comprising:

using a configuration variable code book containing a voice source code vector having only a plurality of non-zero amplitude values; and

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variably replacing a position of a sample of the non-zero amplitude value in the configuration variable code book using an index and a transmission parameter indicating a feature amount of voice.

2. (Twice Amended) The method according to claim 1, further comprising:

variably replacing the position of the sample of the non-zero amplitude value in the configuration variable code book using the index and a lag value corresponding to a pitch period which is a transmission parameter indicating the feature amount of voice.

4. (Twice Amended) The method according to claim 1, further comprising:

variably replacing the position of the sample of the non-zero amplitude value in the configuration variable code book using the index and a lag value corresponding to a

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pitch period which is a transmission parameter indicating the feature amount of voice and a pitch gain value.

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7. (Twice Amended) A voice decoding method for decoding a voice signal coded by a voice coding method based on analysis-by-synthesis vector quantization comprising:

using a configuration variable code book containing a voice source code vector having only a plurality of non-zero amplitude values; and

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variably replacing a position of a sample of the non-zero amplitude value in the configuration variable code book using an index and a transmission parameter indicating a feature amount of voice.

8. (Twice Amended) The method according to claim 7, further comprising:

variably replacing the position of the sample of the non-zero amplitude value in the configuration variable code book using the index and a lag value corresponding to a pitch period which is a transmission parameter indicating the feature amount of voice.

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10. (Twice Amended) The method according to claim 7, further comprising:

variably replacing the position of the sample of the non-zero amplitude value in the configuration variable code book using the index and a lag value corresponding to a

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pitch period which is a transmission parameter indicating the feature amount of voice and a pitch gain value.

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13. (Twice Amended) A voice coding apparatus based on analysis-by-synthesis vector quantization comprising:

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a configuration variable code book unit containing a voice source code vector having only a plurality non-zero amplitude values, wherein said configuration variable code book unit variably replaces a position of a sample of the non-zero amplitude value in said configuration variable code book unit using an index and a transmission parameter indicating a feature amount of voice.

14. (Twice Amended) The apparatus according to claim 13, wherein:

said configuration variable code book unit variably replaces the position of the sample of the non-zero amplitude value in said configuration variable code book unit using the index and a lag value corresponding to a pitch period which is a transmission parameter indicating the feature amount of voice.

15. (Twice Amended) The apparatus according to claim 13, wherein:

said configuration variable code book unit variably replaces the position of the sample of the non-zero amplitude value in said configuration variable code book unit using the index and a lag value corresponding to a pitch period which is a transmission parameter indicating the feature amount of voice and a pitch gain value.

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C1/ 16. (Twice Amended) A voice decoding apparatus for decoding a voice signal coded by a voice coding apparatus based on analysis-by-synthesis vector quantization comprising:

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a configuration variable code book unit containing a voice source code vector having only a plurality of non-zero amplitude values, wherein

said configuration variable code book unit variably replaces a position of a sample of the non-zero amplitude value using an index and a transmission parameter indicating a feature amount of voice.

17. (Twice Amended) The apparatus according to claim 16, wherein:

said configuration variable code book unit variably replaces the position of the sample of the non-zero amplitude value in said configuration variable code book unit using the index and a lag value corresponding to a pitch period which is a transmission parameter indicating the feature amount of voice.

18. (Twice Amended) The apparatus according to claim 16, wherein:

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said configuration variable code book unit variably replaces the position of the sample of the non-zero amplitude value in said configuration variable code book unit using the index and a lag value corresponding to a pitch period which is a transmission parameter indicating the feature amount of voice and a pitch gain value.

REMARKS

An Office Action was mailed on July 17, 2002. Claims 1 - 18 are pending in the present application. Applicants amend claims 1, 2, 4, 7, 8, 10 and 13 - 18. No new matter is introduced.

REJECTIONS UNDER 35 U.S.C. § 102

Claims 1 - 18 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,963,896 to Ozawa. Applicants amend claims 1, 2, 4, 7, 8, 10 and 13 - 18 to further clarify the nature of their invention, and respectfully traverse this rejection.

Applicants' claimed invention (for example, as claimed in independent claims 1, 7, 13 and 16) discloses a speech coding and decoding method and apparatus that involves the vector-quantization of the analysis-by-synthesis type, using a configuration variable code book. Each of the code words contained in the configuration variable code book is constituted only from a plurality of non-zero amplitude values. Sample positions associated with the non-zero amplitude values are variably replaced using both an index i and a transmission parameter ρ which represents a feature amount of voice. The